



DisplayPort Extender over Single SC Fiber Optic Cable



Model #: FO-DP-300-EMI



WQXGA
2560x1600

© 2011 Avenview Inc. All rights reserved.

The contents of this document are provided in connection with Avenview Inc. ("Avenview") products. Avenview makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. No license, whether express, implied, or otherwise, to any intellectual property rights is granted by this publication. Except as set forth in Avenview Standard Terms and Conditions of Sale, Avenview assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products including, but not limited to, the implied warranty of merchantability, fitness for a particular purpose, or infringement of any intellectual property right. Reproduction of this manual, or parts thereof, in any form, without the express written permission of Avenview Inc. is strictly prohibited.

Table of Contents

Section 1: Getting Started	3
1.1 Important Safeguards	3
1.2 Safety Instructions	3
1.3 Regulatory Notices Federal Communications Commission (FCC)	4
1.4 Introduction	4
1.5 Package Contents.....	4
1.6 Before Installation.....	4
1.7 Installation	5
1.8 Troubleshooting.....	6
1.9 Caution.....	6
Section 2: Specification	7
2.1: Display Port Pin Assignment	8

Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- Causes external to the product, such as electric power fluctuation or failure.
- Use of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview FO-DP-300M-EMI, Display Port Extender over Fiber Optic has been tested for conformity to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the FO-DP-300M-EMI should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Do not view directly into the laser module of transmitter or the end of the other side of optical cable connected to transmitter with an optical instrument.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

FO-DP-300M-EMI, Optical DISPLAY PORT extension module,

This unique fiber optical transceiver let your display device extend up to 300 meters (1000ft) away from host based on Display Port standard without signal degradation at WQXGA (2560X1600) resolution.

- High Speed and long distance transmission by optical system
- Compatible with Display Port standard V1.1a
- Main-link video signal / AUX data and Hot Plug Detection signal is transmitted by 1ch multi-mode fiber
- DPCD compliant (No support HDCP mode)
- External Power supply

1.5 Package Contents

Before you start the installation of FO-DP-300M-EMI, please check the package contents.

- | | |
|----------------------------|-----|
| - Transmitter | x 1 |
| - Receiver | x 1 |
| - Power Adapter (5VDC, 2A) | x 1 |
| User's Manual | x 1 |

1.6 Before Installation

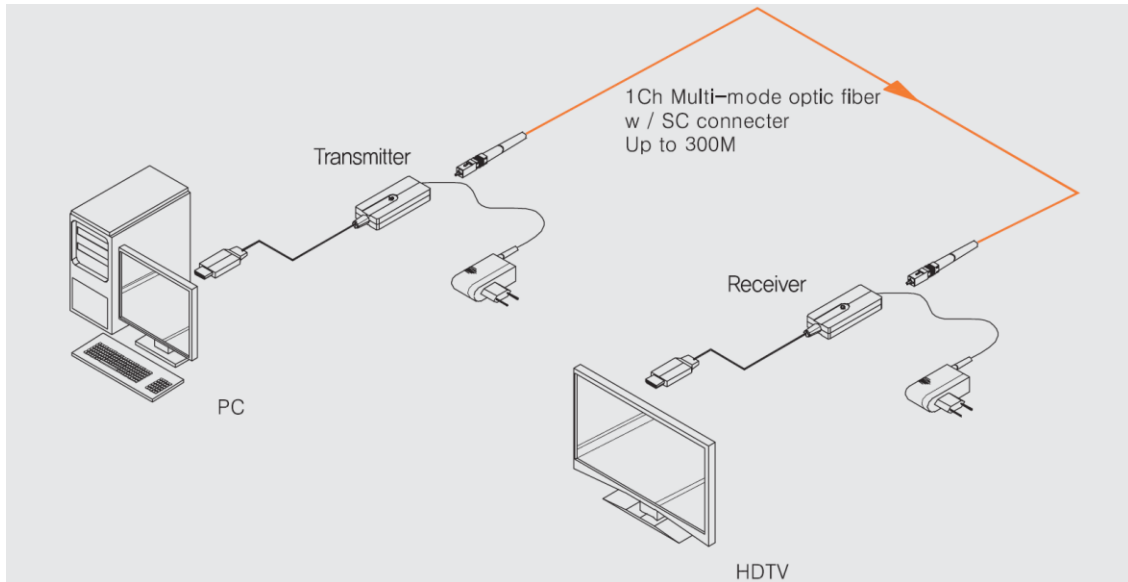
- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.



1.7 Installation

This product is composed of a Transmitter and a Receiver.

The Transmitter should be connected to the source (Computer's DISPLAY PORT) and the Receiver should be connected the DISPLAY PORT of the digital display device (Monitor). Avenview FO-DP-300M-EMI Transmitter / Receiver is designed to be used with SC type standard optical cable (Multi-Mode optical fiber: 50/125, 62.5/125um). Connect Multi-mode SC connector type 1 channel standard fiber optic cable between transmitter and receiver. Connect power adapters (or USB power cable) to both of transmitter and receiver module.



1.8 Troubleshooting

General Troubleshooting	
Problem	Possible Solution
No Image	<ul style="list-style-type: none">• Check if the PC Power is on• Check if connection to the computer and the monitor are correct.• Turn the PC Power off and on again.• Please use DC adapter (5V, 2A) included in the package for transmitter and receiver.
LCD Screen Defects Appear	<ul style="list-style-type: none">• This product supports up to WUXGA resolution.• Check the maximum resolution range of the graphics card.

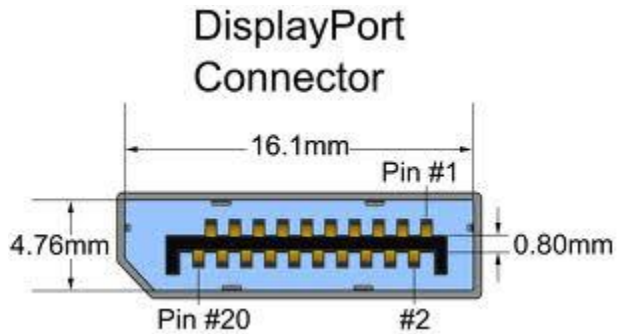
1.9 Caution

1. Do not put heavy object on top of the FO-DP-300M-EMI. It may cause product malfunction.
2. Put the product on even and stable location. If the product falls down or dropped, it may get damaged.
3. Keep away from high temperature (over 50°C), low temperature (under 0°C) or high humidity. It may cause a fire and injury by electrical shock.
4. Use DC power adapter with correct specification. Otherwise it may cause fire.
5. Use the multimode (50/125um) optical fiber.
6. Do not view directly laser module of transmitter or the end of the other side of optical cable connected to transmitter with optical instrument.
7. Do not twist or pull by force either ends of the optical cable. It can cause malfunction. Minimum bending diameter is 45mm

Section 2: Specification

Item	Description	
Units	FO-DP-300-EMI (Transmitter)	FO-DP-300-EMI (Receiver)
Unit Description	DisplayPort Extender Transmitter	DisplayPort Extender Receiver
Input Signal	DisplayPort Signal v1.1a	
Output Signal	DisplayPort Signal v1.1a	
Video Bandwidth	3.5Gbps / Channel	
Supported Resolution & Distance *	WQXGA 2560 x 1600 @ 300 meters (1000 feet)	
Electrical Connector	20 Pin DisplayPort Plug	
Dimensions (L x W x H)*	2.91" x 1.30" x 0.45"	
Power Supply	5V 2A DC	
Power Consumption	1.5W (max)	
Optical		
Optical Source	850nm VCSEL	
O/E Converter	PIN Photo Diode	
Fiber	Multi-Mode optical Fiber(SC Type Connector)	
Fiber Type	50/125 μm Multi-mode glass fiber OM2 or OM3 rated fiber	
Environmental		
Operating Temperature	32° ~ 104°F (0° to 40°C)	
Storage Temperature	-4° ~ 140°F (-20° ~ 60°C)	
Relative Humidity	20~90% RH (no condensation)	

2.1: Display Port Pin Assignment



TRANSMITTER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	Main Link Lane 0+	9	Main Link Lane 2-	17	Auxiliary Channel -
2	Ground	10	Main Link Lane 3+	18	Hot Plug Detect
3	Main Link Lane 0-	11	Ground	19	Return
4	Main Link Lane 1+	12	Main Link Lane 3-	20	Connector Power (3.3V,500mA)
5	Ground	13	Configuration 1		
6	Main Link Lane 1-	14	Configuration 2		
7	Main Link Lane 2+	15	Auxiliary Channel +		
8	Ground	16	Ground		

RECEIVER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	Main Link Lane 0+	9	Main Link Lane 2-	17	Auxiliary Channel -
2	Ground	10	Main Link Lane 3+	18	Hot Plug Detect
3	Main Link Lane 0-	11	Ground	19	Return
4	Main Link Lane 1+	12	Main Link Lane 3-	20	Connector Power (3.3V,500mA)
5	Ground	13	Configuration 1		
6	Main Link Lane 1-	14	Configuration 2		
7	Main Link Lane 2+	15	Auxiliary Channel +		
8	Ground	16	Ground		



Disclaimer

While every precaution has been taken in the preparation of this document, Avenview Inc. assumes no liability with respect to the operation or use of Avenview hardware, software or other products and documentation described herein, for any act or omission of Avenview concerning such products or this documentation, for any interruption of service, loss or interruption of business, loss of anticipatory profits, or for punitive, incidental or consequential damages in connection with the furnishing, performance, or use of the Avenview hardware, software, or other products and documentation provided herein.

Avenview Inc. reserves the right to make changes without further notice to a product or system described herein to improve reliability, function or design. With respect to Avenview products which this document relates, Avenview disclaims all express or implied warranties regarding such products, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement.